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Remarks

Paragraph 0020 has been amended. Support for this amendment may be found in, e.g., paragraph 0034 at page 8, lines 10-11. Claims 1, 4, 14, 17, 18 and 25 have also been amended. Support for these claim amendments may be found in, e.g., paragraph 0002 at page 1, lines 10-19; paragraph 0020 at page 3, line 32 through page 4, line 1; paragraph 0023 at page 4, lines 15-20; paragraph 0032 at page 7, lines 30-32; paragraphs 0034 through 0036 at lines 5-32; and in Figs. 1 and 7 (which show, *inter alia*, the application of release polymer to only a part of the substrate).

Applicants thank the Examiner for extending to applicants' undersigned attorney the courtesy of a telephonic interview on Monday, August 14, 2006. The interview involved the amendments shown above and arguments shown below. Applicants request entry and consideration of the present amendment without requiring the filing of a further Request for Continuing Examination (one such Request was earlier submitted on December 21, 2005.

Following entry of this amendment, claims 1-28 will be pending in the application.

Rejection of Claims 1, 2, 4, 9-10, 12-15, 17-18, 23-25 and 28 Under 35 U.S.C. §102(b)

Claims 1-2, 4, 9-10, 12-15, 17-18, 23-25 and 28 were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,209,815 (Fleming et al.), on grounds inter alia that:

"Fleming is cited for the same reasons previously discussed, which are incorporated herein.

"Applicants reiterate the Examiner's rejection and argue (1) Applicants apply a polymer which "can provide a partly coated substrate" (emphasis added), (2) Applicants assert Fleming applies by spin coating a release polymer 50 "over all of their substrate 10", (3) Applicants speculate the "scalloped" borders of the coatings in the drawings of Fleming suggest portions of the release layer are broken away and provide magnified portions of the drawings, (4) Applicants assert Fleming does not apply the release layer to a portion of the substrate in a desired pattern.

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"In response, the Examiner responds to each argument as follows:

"To (1), the Examiner points out that Applicants' argument makes a point of citing the polymer "can provide a partly coated substrate", reasonably indicating that even Applicants recognize that release coatings applied to most or all of the substrate is permissible since a partly coated substrate is only one possibility by virtue of the word "can"." (see the Final Rejection at page 2).

Reconsideration is requested. In full context, the word "can" was used to describe the possible formation of "circuit traces, electrical connections, electrodes or the like", and not to say that applicants apply release polymer to all of the substrate. In the interest of furthering prosecution, applicants have amended claim 1 to recite "applying a release polymer to a <u>first</u> portion of a substrate in a desired pattern <u>on only a part of the substrate</u>" and have made similar amendments to independent claims 4, 14, 17 and 25.

The Final Rejection also asserted that:

"To (2) Applicants note Fleming uses spin coating to apply the release coat, as does Applicants, Spec. page 6, line 15 for the same purpose. Applicants further teach, for example, dip coating and roll coating, which are conventionally used for continuous coatings, further indicating applying release coatings over all of a substrate is permissible, contrary to Applicants' assertions." (see the Final Rejection at pages 2-3).

Reconsideration is requested. Spin coating may be used to form a simple release polymer pattern on only a part of a substrate, for example by applying the release polymer at allocation radially outward from the spinning substrate. This will provide a substrate with an uncoated central circular area surrounded by a coated area. Dip coating and roll coating may likewise be used to form a release polymer pattern on only a part of a substrate, for example by dipping the substrate only part way into the release polymer or by using grooved, gapped or narrow width coating rolls.

The Final Rejection also asserted that:

"To (3), Applicants arguments regarding the "scalloped" ends of the magnified figures are not convincing. Figures are merely by way of illustration, are not to scale, and there is nothing in Fleming to support Applicants' suppositions. Such

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ends could just as well be artistic license or interpretation, reproduction artifacts, etc. In fact, a careful reading of Fleming indicates the reference never limits the release coating to any specific pattern or coverage." (see the Final Rejection at page 3).

Reconsideration is requested. Fleming et al. nowhere disclose the application of release polymer in a desired pattern on only a part of a substrate. Fleming et al. would have no need to do so – they form a pattern later, using a sequence of photolithography steps (see e.g., col. 3, line 65 through col. 4, line 39) that would not have been needed if the pattern had already been formed. Fleming et al. indeed should be given a careful reading, but steps not shown should not be read into Fleming et al.

The Final Rejection also asserted that:

"To (4), Fleming does not limit the release coating to any specific pattern or coverage of the coating, and applies the release coating using the same means as Applicants, so that the skilled artisan would have reasonably expected similar outcomes. The Examiner further points out that in the claims, the release layer is applied "in a desired pattern" without definition in the claims or Specification that this must be linear/non-uniform/circular/or any other specific or intended meaning. Thus any visual arrangement of the coating is permissible by

Applicants' claims including those of Fleming." (see the Final Rejection at page 3). Reconsideration is requested. Fleming et al. do not apply the release coating "using the same means as Applicants". Fleming et al. apply a release coating to the whole substrate (see e.g., col. 3, lines 57-61). Fleming et al. do not disclose or suggest applying a release polymer in a desired pattern on only a part of a substrate.

Applicants accordingly request withdrawal of the 35 U.S.C. §102(b) rejection of claims 1-2, 4, 9-10, 12-15, 17-18, 23-25 and 28 as being anticipated by Fleming et al.

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Rejection of Claims 5-8, 11, 19-22 and 27 under 35 U.S.C. §103(a)

Claims 5-8, 11, 19-22 and 27 were rejected under 35 U.S.C. §103(a) as being unpatentable over Fleming et al., on grounds that:

"Fleming is cited for the same reasons previously discussed, which are incorporated herein and as above. Since those arguments are not persuasive, neither would be those related to the claims rejected under this heading." (see the Final Rejection at pages 3-4).

Reconsideration is requested. As discussed above, Fleming et al. do not apply a release polymer in a desired pattern on only a part of a substrate. Absent such a pattern, Fleming et al. could not carry our a step of "applying a substrate-adherent polymer over the pattern and over at least a second portion of the substrate in a continuous layer having a substantially constant height with respect to the substrate over the pattern and second substrate portion" as recited in rejected claims 5-8 and 11, nor a step of "applying a continuous layer of a substrateadherent polymer comprising a polyimide over the pattern and over at least a second portion of the substrate" as recited in rejected claims 19-22, nor a step of "applying a continuous submicron-thickness polyimide layer over the pattern and over at least a second portion of the substrate" as recited in rejected claim 27.

Applicants accordingly request withdrawal of the 35 U.S.C. §103(a) rejection of claims 5-8, 11, 19-22 and 27 as being unpatentable over Fleming et al.

Rejection of Claims 3, 16 and 26 under 35 U.S.C. §103(a)

Claims 3, 16 and 26 were rejected under 35 U.S.C. §103(a) as being unpatentable over Fleming et al. in view of U.S. Patent No. 5,759,625 (Laubacher et al.), on grounds that:

"Fleming and Laubacher are cited for the same reasons previously discussed, which are incorporated herein and as above.

"Applicants argue the combination of references does not lead to applying the release layer to a portion of the substrate in a desired pattern. This argument is superfluous since Laubacher was introduced to illustrate the utility of fluoropolymers as release coating materials, a point not contested by Applicants. Consequently Applicants arguments are not persuasive and the rejection is

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maintained." (see the Final Rejection at page 4).

Reconsideration is requested. Like Fleming et al., Laubacher et al. do not apply a release polymer in a desired pattern on only a part of a substrate. Both Fleming et al. and Laubacher et al. apply a continuous layer of release polymer over all or a substrate and later form a pattern using s series of photolithography steps. Combining Fleming et al. and Laubacher et al. would nor provide a step of "applying a release polymer to a first portion of a substrate in a desired pattern on only a part of the substrate" as recited in rejected claims 3 and 16 or a step of "applying a submicron-thickness release polymer layer to a first portion of a substrate in a desired pattern on only a part of the substrate" as recited in rejected claim 26.

Applicants accordingly request withdrawal of the 35 U.S.C. §103(a) rejection of claims 3, 16 and 26 as being unpatentable over Fleming in view of Laubacher et al.

Conclusion

Applicants have made an earnest effort to address the rejections. Withdrawal of the rejections and allowance of all claims are requested. The Examiner is requested to call the undersigned attorney if there are any questions regarding the application or this Amendment.

Signature

Respectfully submitted on behalf of 3M Innovative Properties Company,

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